UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/714,316	11/16/2000	Thomas R. Justen	US-1483	6478

27062 7590 10/23/2002

ZIOLKOWSKI PATENT SOLUTIONS GROUP, LLC (BMCA)
14135 NORTH CEDARBURG ROAD
MEQUON, WI 53097

EXAMINER
VASUDEVA, AJAY

ART UNIT	PAPER NUMBER
3617	

DATE MAILED: 10/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/714,316	JUSTEN ET AL.	
	Examiner	Art Unit	
	Ajay Vasudeva	3617	

-- The MAILING DATE of this communication appears on the cover sheet with th correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *03 July 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) *1-12 and 14-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-11,14-18,20-25,27 and 28* is/are rejected.

7)☐ Claim(s) *12,19 and 26* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on *16 November 2000* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *8* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following features must be shown or the feature(s) canceled from the claim(s).

(A) An outboard engine cover with an integrally formed air intake silencer, and a tuning tube in communication with an inlet tube, as set forth in claims 9 and 21.

(B) An outboard engine cover with an integrally formed air intake silencer, having a tuning tube attached to a bottom wall of the cover, as set forth in claim 12.

(C) An outboard engine cover with an integrally formed air intake silencer, having a tuning tube in a wrap-around relationship with another tuning tube, as set forth in claims 19 and 26.

No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 1 and 21 are objected to because of the following informalities:

(A) In claim 1 (line 2), after "**a second**", delete " , ".

(B) In the applicant's amendment dated 7/3/2002, claim 21 has been incorrectly indicated as claim 20.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1 (line 4), after "a second end", use of "said first end and said second end" is indefinite. It is not clear whether such ends belong to the air inlet pipe, or to the tuning tube.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in-
> (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
> (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

6. Claims 1-5 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Takeda (US 4,538,556).

Takeda shows an air intake silencer for an internal combustion engine (figure 1), generally as claimed, having a straight inlet pipe [2] with an inlet passage, and a tuning tube [4] with a tuning passage in fluid communication with the inlet passage. The inlet pipe and the tuning tube have substantially equal diameters.

Examiner's Note: Applicant may note that although the tuning tube uses neck sections [5, 6] to connect it to the inlet pipe, the tuning tube together with the neck sections represent a single conduit structure, and therefore are not considered patentably distinct from a similar structure that is made of a single piece.

The applicant may also note that noise attenuation depends entirely on the volume of the resonator. The volume of the resonator, in turn, is a function of resonator's length, because

Volume = Length x Breadth x Height (when the resonator is cuboid), or

Volume = Length x (π) x (Radius)^2 (when the resonator is cylindrical).

Therefore, the length of the resonator would determine cancellation of specific frequencies of sound when all other dimensions are kept constant.

7. Claims 1, 3-5, 7 and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Bloomer (US 6,422,192).

Bloomer shows an air intake silencer for an internal combustion engine (figure 6), generally as claimed, having an inlet pipe [219] with an inlet passage, and a tuning tube [220] with a tuning passage in fluid communication with the inlet passage. The inlet pipe and the tuning tube are integrally formed and have substantially equal diameters.

8. Claims 1-5, 7 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by JP (02-091419).

JP ('419) shows an air intake silencer for an internal combustion engine (figure 1), generally as claimed, having an inlet pipe [5] with an inlet passage, and a tuning tube [7] with a tuning passage in fluid communication with the inlet passage. The inlet pipe and the tuning tube are integrally formed and have substantially equal diameters.

9. Claims 21 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Kiekhaefer (US 2,971,507).

Kiekhaefer ('507) discloses a silencer integrally formed with a cover of an outboard motor, having air inlet [13], an air inlet pipe [20] defining a chamber [23] and coupled to the air inlet, and at least one tuning tube [28] in flow communication with the inlet pipe, together configured to cancel a portion of sound traveling through the inlet pipe.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takeda.

Takeda shows a silencer with an inlet tube and a tuning tube.

Takeda does not show the inlet tube as being integrally formed with the tuning tube.

It would have been obvious for one skilled in the art to manufacture the inlet tube integrally with the tuning tube as one unit. Making both tubes integral as a single unit would reduce the number of components, thereby reducing assembly time and labor.

12. Claims 21-25, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heidner in view of Bloomer.

Heidner discloses a silencer for an outboard motor with an internal combustion engine, having air inlet pipe [37] connected to a cover [17] for the motor at a top wall as well as a side wall of the cover for supplying air. The silencer is integrally former with the cover.

Heidner is silent on a provision of a tuning tube for the inlet pipe.

Bloomer shows a tuning tube for an air inlet of an internal combustion engine.

It would have been obvious for one skilled in the art at the time of the invention to attach a tuning tube to the inlet tube of Heidner, as taught by Bloomer. Integrating a tuning tube to the inlet tube would provide the benefits of further lowering the noise caused by the intake of the engine, which will reduce the noise pollution and make the watercraft operation more enjoyable to the operator.

13. Claims 9-11, 13-18, 20-25, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferguson (US 4,978,321) in view of Bloomer.

Ferguson ('321) discloses an air intake for an outboard motor with an internal combustion engine (figure 2), having air inlet pipe [38] connected to an upper cover [22] at a top wall as well as at a side wall of the cover for supplying air. The upper cover is configured to be connected to a lower cover [20]. The intake is integrally formed with the cover.

Ferguson ('321) is silent on a provision of a tuning tube for the inlet pipe.

Bloomer shows a tuning tube for an air inlet of an internal combustion engine.

It would have been obvious for one skilled in the art at the time of the invention to attach a tuning tube to the inlet tube of Ferguson ('321), as taught by Bloomer. Integrating a tuning tube to the inlet tube would provide the benefits of further lowering the noise caused by the intake of the engine, which will reduce the noise pollution and make the watercraft operation more enjoyable to the operator.

Allowable Subject Matter

14. Claims 6, 12, 19 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

15. Applicant's arguments with respect to claims 1-5, 7-11, 14-18, 20-25, 27 and 28 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

16. This action is a non-final action.

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hwang et al., Ma, Tachikawa et al, Nakata et al., Araki et al., and JP (314) describe tuning tubes for noise attenuation.

Hubbell, Alexandrowicz, Allain, Kollmann et al., and Katayama et al (536) describe air inlets that are integrally formed with the outboard motor cover.

JP (560), GB (852), Germany (669), JP (387), JP (131), Germany (823) , SU (385) describe tuning tubes.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ajay Vasudeva whose telephone number is (703) 306-5992.

S. JOSEPH MORANO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600

AV

October 19, 2002